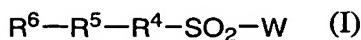
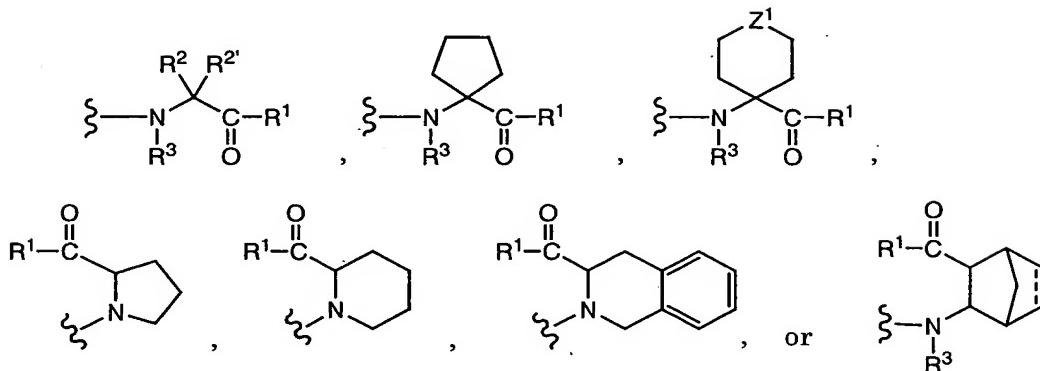


## CLAIMS

1. A compound represented by the general formula (I):



wherein W is a group represented by the formula:



5

wherein  $R^1$  is  $NHOH$ , hydroxy, or lower alkyloxy;

$R^2$  and  $R^{2'}$  are each independently hydrogen atom, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl; or optionally substituted heteroarylalkyl;

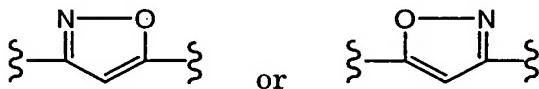
10  $R^3$  is hydrogen atom, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl, or optionally substituted heteroarylalkyl;

$Z^1$  is  $-CH_2-$ ,  $-NH-$ ,  $-O-$ , or  $-S-$ ;

a broken line (---) represents the presence or absence of a bond;

15  $R^4$  is optionally substituted arylene or optionally substituted heteroarylene;

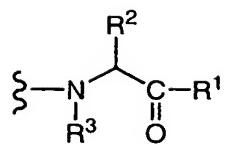
$R^5$  is a group represented by the formula:



20  $R^6$  is optionally substituted aryl, optionally substituted heteroaryl, optionally substituted cycloalkyl, or optionally substituted non-aromatic heterocyclic groups;

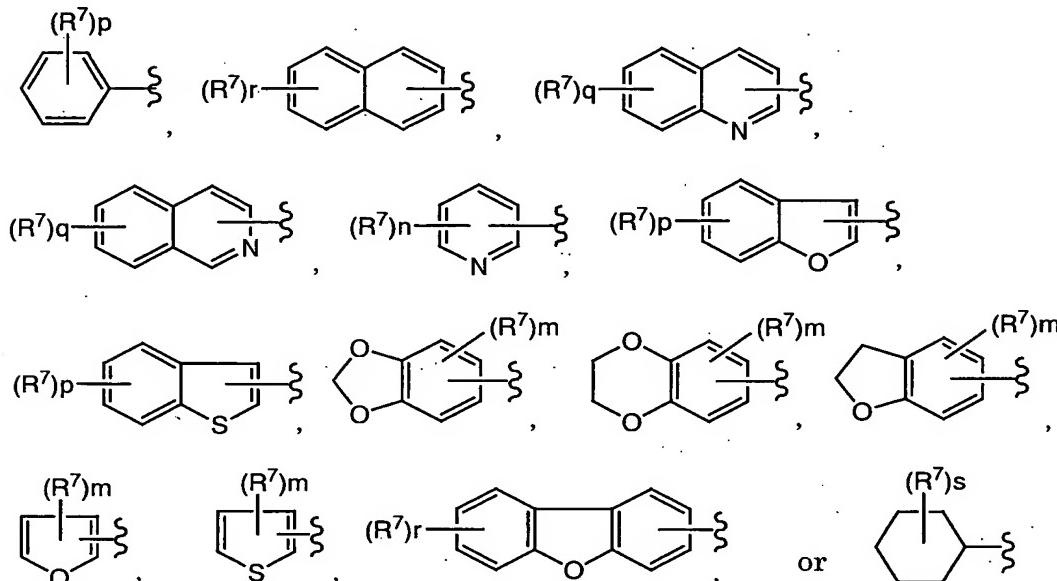
its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

2. A compound of claim 1 wherein W is a group represented by the formula:



wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are as defined in claim 1, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

3. A compound of claims 1 or 2 wherein R<sup>6</sup> is a group represented by the formula:



wherein R<sup>7</sup> is each independently halogen, lower alkyl, cycloalkyl, lower alkenyl, lower alkynyl, lower alkyloxy, lower alkenyloxy, lower alkylthio, halo(lower)alkyl, halo(lower)alkyloxy, halo(lower)alkylthio, hydroxy, hydroxy(lower)alkyl, carboxy, lower alkyloxycarbonyl, lower alkylsulfonyl, carbamoyl, acyl, acyloxy, nitro, cyano, optionally substituted amino, or optionally substituted aminocarbonyl; m is an integer from 0 to 3; n is an integer from 0 to 4; p is an integer from 0 to 5; q is an integer from 0 to 6; r is an integer from 0 to 7; s is an integer from 0 to 11, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

- 15 4. A compound of any one of claims 1 to 3 wherein R<sup>1</sup> is hydroxy, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

5. A compound of any one of claims 1 to 4 wherein R<sup>2</sup> is lower alkyl optionally substituted by halogen, hydroxy, carboxy, carbamoyl, mercapto, lower alkylthio,

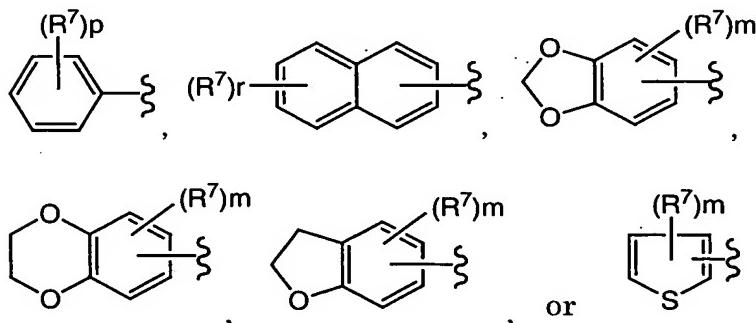
guanidino, amino, or cycloalkyl; aryl optionally substituted by hydroxy; aralkyl optionally substituted by halogen, hydroxy, or nitro; heteroaryl optionally substituted by hydroxy; heteroarylalkyl optionally substituted by hydroxy; or hydrogen atom, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

6. A compound of claim 5 wherein R<sup>2</sup> is hydrogen atom, methyl, isopropyl, s-butyl, isobutyl, t-butyl, hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxymethyl, carboxyethyl, carbamoylmethyl, carbamoyleethyl, mercaptomethyl, 2-methylthioethyl, cyclohexylmethyl, 3-guanidinopropyl, 4-aminobutyl, phenyl, 4-hydroxyphenyl, benzyl, 4-hydroxybenzyl, 4-fluorobenzyl, 4-chlorobenzyl, 4-bromobenzyl, 4-nitrobenzyl, phenylethyl, 1-naphthylmethyl, 2-naphthylmethyl, biphenylmethyl, indolyl, thienyl, indol-3-ylmethyl, (5-hydroxyindol-3-yl)methyl, thiophen-2-ylmethyl, imidazolylmethyl, benzoxazol-2-ylmethyl, benzthiazol-2-ylmethyl, or benzimidazol-2-ylmethyl, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

10 7. A compound of any one of claims 1 to 6 wherein R<sup>3</sup> is hydrogen atom, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

15 8. A compound of any one of claims 1 to 7 wherein R<sup>4</sup> is 1,4-phenylene or 2,5-thiophendiyl, its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

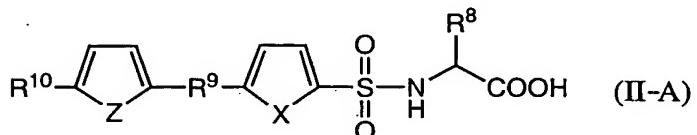
20 9. A compound of any one of claims 1 to 8 wherein R<sup>6</sup> is a group represented by the formula:



25 wherein R<sup>7</sup>, m, p, r, and s are as defined in claim 3, its optically active substance,

their pharmaceutically acceptable salt, or a solvate thereof.

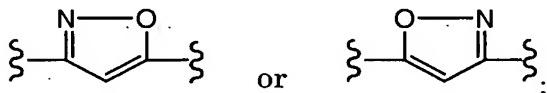
10. A compound represented by the general formula (II-A):



wherein R<sup>8</sup> is hydrogen atom, methyl, isopropyl, s-butyl, isobutyl, t-butyl,  
5 hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxymethyl, carboxyethyl,  
2-methylthioethyl, phenyl, 4-hydroxyphenyl, benzyl, 4-hydroxybenzyl, or indol-  
3-ylmethyl;

X is -CH=CH- or -S-;

R<sup>9</sup> is a group represented by the formula:

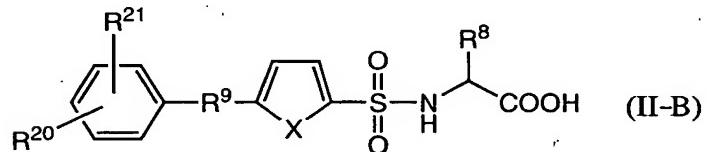


10

Z is -CH=CH- or -S-;

R<sup>10</sup> is hydrogen atom, halogen, lower alkyl, lower alkyloxy, lower alkylthio,  
halo(lower)alkyl, halo(lower)alkyloxy, halo(lower)alkylthio, hydroxy,  
hydroxy(lower)alkyl, acyl, nitro, cyano, or optionally substituted amino, its  
15 optically active substance, their pharmaceutically acceptable salt, or a solvate  
thereof.

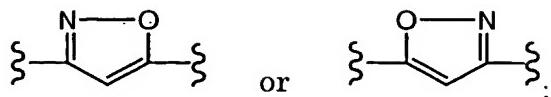
11. A compound represented by the general formula (II-B):



wherein R<sup>8</sup> is hydrogen atom, methyl, isopropyl, s-butyl, isobutyl, t-butyl,  
20 hydroxymethyl, 1-hydroxyethyl, 2-hydroxyethyl, carboxymethyl, carboxyethyl,  
2-methylthioethyl, phenyl, 4-hydroxyphenyl, benzyl, 4-hydroxybenzyl, or indol-  
3-ylmethyl;

X is -CH=CH- or -S-;

R<sup>9</sup> is a group represented by the formula:



$R^{20}$  and  $R^{21}$  are each independently hydrogen atom, halogen, lower alkyl, lower alkyloxy, lower alkylthio, halo(lower)alkyl, halo(lower)alkyloxy, halo(lower)alkylthio, hydroxy, hydroxy(lower)alkyl, acyl, nitro, cyano, or 5 optionally substituted amino; or  $R^{20}$  and  $R^{21}$  are taken together to form a group represented by the formula: -CH=CH-CH=CH-, -O-CH<sub>2</sub>-O-, -O-CH<sub>2</sub>-CH<sub>2</sub>-O-, -CH<sub>2</sub>-CH<sub>2</sub>-O-, or -O-CH<sub>2</sub>-CH<sub>2</sub>- when the carbon atom bonded to  $R^{20}$  is adjacent to the carbon atom bonded to  $R^{21}$ , its optically active substance, their pharmaceutically acceptable salt, or a solvate thereof.

- 10    12.    A pharmaceutical composition which contains a compound of any one of claims 1 to 11 as an active ingredient.
- 13.    A metalloproteinase inhibitor which contains a compound of any one of claims 1 to 11 as an active ingredient.
- 14.    A matrix metalloproteinase inhibitor which contains a compound of any one of 15 claims 1 to 11 as an active ingredient.
- 15.    Use of a compound of any one of claims 1 to 11 for the preparation of a medicament for treating a disease caused by or related to metalloproteinase.
- 16.    A method for treating a disease caused by or related to metalloproteinase of a mammal comprising administering to said mammal including human a 20 therapeutically effective amount of a compound of any one of claims 1 to 11.